

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| | | | |
|--|---|---|-----------------------|
| Applicant's or agent's file reference H042701 | FOR FURTHER ACTION | | See Form PCT/IPEA/416 |
| International application No. PCT/DE2004/002623 | International filing date (day/month/year) 26.11.2004 | Priority date (day/month/year) 03.12.2003 | |
| International Patent Classification (IPC) or national classification and IPC C04B28/02, C04B40/00 | | | |
| Applicant C04B28/02, C04B40/00 | | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 6 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____ , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | | |

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|---|-----------------------------------|
| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/002623

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))
 publication of the international application (Rule 12.4)
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:

pages 5, 6 as originally filed/furnished
 pages* 1-4 received by this Authority on 03.11.2005 with letter of 03.11.2005
 pages* _____ received by this Authority on _____

the claims:

nos. _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 1-9 received by this Authority on 03.11.2005 with letter of 03.11.2005
 nos.* _____ received by this Authority on _____

the drawings:

sheets _____ as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages 1-4
 the claims, nos. 1-9
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/DE2004/002623Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | | |
|-------------------------------|--------|-------|-----|
| Novelty (N) | Claims | 1 – 9 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1 – 9 | NO |
| Industrial applicability (IA) | Claims | 1 – 9 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following documents

D1: RU-C2-2 177 919 (MOROZOV JURIJ LEONIDOVICH;
TSEL'NER MIKHAIL EFIMOVICH) 10 January 2002

D2: WO 99/15475 A ("HOLDERBANK" FINANCIERE GLARUS
AG) 1 April 1999

2. The application does not meet the requirements of PCT Article 33(1) in the light of the applicant's argument made in the letter of 3 November 2005 either, because the subject matter of claims 1 to 9 does not involve an inventive step (PCT Article 33(3)).

2.1 D1 is considered the prior art closest to the subject matter of claims 1 and 9; insofar as this claim can be understood, said document discloses the following features of the claim (the references in parentheses relate to said document):

An additive combination for concrete containing electrolytically modified lignosulfonates with a

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molecular weight of 10 to 50 kDa, sulfonated naphthalene formaldehyde condensates and a hydrophobic organosilicon component.

The subject matter of claims 1 and 9 differs from D1 in that, in addition, thiosulfate, thiocyanate and/or sodium sulfate in combination with sodium carbonate are added.

However, it can be assumed that a person skilled in the art proceeding from the teaching of D1 and attempting to improve further the accelerating and hardness-increasing effect would consult D2, in which mineral salts such as thiosulfates, thiocyanates and/or carbonates are used in combination with lignosulfates and sulfonated naphthalene formaldehyde condensates so as to accelerate hardening (see page 3; lines 5 to 25). Since no unexpected effects were shown with respect to the prior art, the subject matter of independent claims 1 and 9 thus appears to arise obviously from a combination of D1 with D2 and cannot therefore be considered inventive.

In the letter of 3 November 2005, the applicant points to the study report issued by the IBBI (Ingenieurbüro für Baustoffanwendung, Bauwerkunterstützung und Instandsetzungsplanung) which reveals unexpected effects with respect to early hardening. Said report, however, describes increases in early hardening in a concrete mixture containing **exclusively** electrolytically modified

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lignosulfonic acids (Lignopan B) in a quantity of 1.5%, but no further concrete additives. The report therefore shows no effects which result from an additive combination of electrolytically modified lignosulfonic acids, sulfonated naphthalene formaldehyde condensates and hydrophobic organosilicon (as known from D1) with thiosulfates, thiocyanates and/or carbonates (as known from D2).

2.2 Dependent claims 2 to 8 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT novelty and inventive step requirements. The reasons for this are as follows:

No surprising effects were shown for the subject matter of dependent claims 2 to 8. Instead, the features of dependent claims 2 to 8 are merely obvious possibilities from which a person skilled in the art would choose for producing concrete (selection of common fine- and coarse aggregates with common sieve curve) according to the circumstances, without thereby being inventive. An inventive step cannot therefore be acknowledged.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The application does not meet the requirements of PCT Article 6 because claims 1 and 9 are not clear.

- The terms "super plasticiser C-3", "hydrophobing agent 139-282" and "Lignopan B" used in claims 1 and 9 appear to be registered trademarks having no clearly delineated meaning, since they are not internationally recognised as standard expressions. The use of these terms thus results in the subject matter of these claims being unclearly defined (see also Box III).
- The expression "kJ" used in claims 1 and 9 as a unit for a molecular weight is unclear and leaves the reader uncertain as to the meaning of the technical feature in question. Consequently, the subject matter of these claims is not clearly defined. With respect to D1, the expression was interpreted as "kDa".

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient**.

Continuation of: **I and III**

Box I:

The amendments submitted with the fax of 3 November 2005 introduce substantive matter which, contrary to PCT Article 34(2) (b), goes beyond the disclosure of the international application as filed. The amendments in question are as follows:

The feature "super plasticiser C-3" was replaced on page 2 of the description by the feature "sulfonated naphthalene formaldehyde condensate as a solvent". However, the original application contains no basis for this amendment.

The examiner's comment in the international search report that the abstracts of the patent documents RU 2177919, WO00/30993 and LV 10006 possibly appear to suggest "sulfonated naphthalene formaldehyde condensates as a solvent" cannot be deemed a disclosure source until evidence is given by translations of the original disclosures and/or technical literature.

The basis for the present report is therefore the originally filed set of claims.

Box III:

The current claims 1 to 9 relate to a product defined (*inter alia*) by the following features:

Supplemental Box

- H1: "super plasticiser C-3"
- H2: "hydrophobing agent 139-282"
- H3: "Lignopan B".

The use of these features in the given context gives rise to a lack of clarity since the aforementioned features appear to relate to commercial names. It is not possible to compare the parameters selected by the applicant with the disclosure of the prior art in this regard. The lack of clarity is such that it was not possible to carry out a complete and meaningful search.

With regard to the abstracts of the patent documents RU 2177919, WO 00/30993 and LV 10006, the feature "super plasticiser C-3" **possibly** appears to suggest "sulfonated naphthalene formaldehyde condensates as a solvent".

The search was therefore restricted to a concrete additive containing a combination of individual additive components, including:

- M1: "sulfonated naphthalene formaldehyde condensate as a solvent"
- M2: "silicon emulsion as a hydrophobic additive" (see line 35 of the present description)
- M3: "electrolytically modified lignosulfonic acids" (see lines 32-33 of the present description).

In the present report, therefore, the features H1-H3 are treated as analogous to the interpretations M1-M3.